

**REMARKS**

The following remarks are responsive to the Official Action mailed May 5, 2006. Applicant notes Examiner's acknowledgement of the election of species of embodiment I. Therefore, Applicant cancels claims 10, 14, 15, 34, 36, 37 and 55 from consideration in the present application.

In the Official Action, Claim 50 is objected to because of a lack of antecedent basis. Specifically the Examiner objects to the fact that the claim recites a limitation "the at least one bend" in lines 1-2 of claim 50. In response to this objection, Applicant has amended claim 50 so as to depend from claim 49 as opposed to claim 47. This amendment rectifies the informality.

Claims 1-9, 11-13, 16-24, 32, 33 and 53 are rejected under 35 U.S.C. 112 2<sup>nd</sup> paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner objects to the phrases "a generally downward direction", "generally downward", "generally horizontally", and similar remarks. Applicant has thus amended all these claim so as to include the term "substantially" as opposed to "generally". This amendment adds no new matter to the claims and should satisfy the Examiner's rejection.

**Claim Rejection - 35 U.S.C. § 102(a) - Appelt**

Claims 1-9, 11-13 and 16-24 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,900,675 to Appelt et al. In response to this rejection, Applicant has amended claim 1, 25 and 47 thereby rendering the rejection moot. Independent claim 1 from which claims 2-9, 11-13, and 16-24 depend now includes the recitation that the semiconductor chip is assembled to the second side of the

attachment portion. The claim also includes a recitation that the first side of the dielectric layer defines a boundary of the assembly and the first side is unobstructed. Therefore, now included in the claim, the first side of the dielectric layer does not have any other element disposed thereon. By having such a structure, the dielectric layer must provide the rigidity and stability for the entire microelectronic assembly. This also enables the microelectronic assembly to have a lower profile as a support plate or similar device is not positioned on a first side of the dielectric layer. This is contrasted with *Appelt* which discloses a base plate 510 connected to the insulating biologic layer 505. As defined in *Appelt*, the base plate 210 includes a piece of material in order to create the necessary CTE match between the base plate and the circuit board. Thus, since *Appelt* does not disclose the dielectric layer as having a first side that is unobstructed and defines a boundary of the assembly, *Appelt* does not anticipate claim 1 of the present application as well as its dependent claims. Applicant asserts that claim 1 and its dependent claims should be deemed patentable over the art cited.

Independent claims 25 and 47 include similar recitations directed towards the first side of the dielectric element or continuous heat having being unobstructed. Thus, these claims as well as their dependent claims should be deemed patentable over *Appelt*.

**Claim Rejection - 35 U.S.C. § 102(b) - Hashimoto**

Claims 1, 23, 25, and 45 are rejected under 35 U.S.C. § 102( b) as being anticipated by U.S. Patent No. 6,489,687 to *Hashimoto*. Similar to that discussed with regards to *Appelt*, independent claims 1 and 25 include recitations where the first side of the dielectric element is unobstructed. This

requires the dielectric element provide the rigidity for the claim structure and in addition, causes the first side of the dielectric element to be a boundary for the assembly helping to define the overall height of the assembly. In contrast, in *Hashimoto*, the first side comprises both the top and bottom of the assembly. In addition, the first side is not unobstructed, because as pointed out by the Examiner, the first side includes terminals 92 extending outwardly therefrom. Therefore, *Hashimoto* does not anticipate claims 1 and 25 of the present application as well as their dependent claims and *Hashimoto* does not disclose a microelectronic assembly having a first side that is unobstructed.

**Claim Rejection 35 U.S.C. § 102(b) - Terui**

Claims 47 and 57 are rejected under 35 §U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,472,732 to *Terui*. As discussed previously, claim 47 has been amended so as to include a recitation that the first side of the continuous sheet is clear of other elements. Thus, the first side of the continuous sheet of the dielectric element defines a boundary of the microelectric assembly and therefore defines one end of the overall height of the assembly. *Terui*, similar to *Appelt* and *Hashimoto* discloses a dielectric element 25 having various features attached to the first side and the second side of the dielectric element. Therefore, the dielectric element of *Terui* is not designed to provide the rigidity for the structure as various other elements including a solder mask layer is disposed on opposite sides of the dielectric element. Thus for arguments similar to those in regard to *Appelt* and *Hashimoto*, Applicant asserts that independent claim 47 as well as it's dependent claims are patentably distinct over *Terui*.

Claim 7 and 56 are rejected under 35 U.S.C. § 102(b) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as obvious over *Appelt*. In response to this rejection, Applicant reiterates that *Appelt* does not disclose new elements added to claim 1 and 47 for which claims 7 and 56 depend. Thus Applicant asserts that these claims should also be patentable.

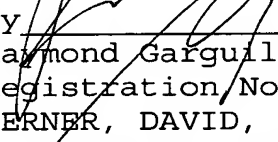
As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone Applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

By   
Raymond Garguilo, Jr.  
Registration No.: 50,930  
LERNER, DAVID, LITTENBERG,  
KRUMHOLZ & MENTLIK, LLP  
600 South Avenue West  
Westfield, New Jersey 07090  
(908) 654-5000  
Attorney for Applicant